

Case 3146

***Valvata minuta* Draparnaud, 1805 (currently *Hauffenia*, *Neohoratia* or *Islamia minuta*; Mollusca, Gastropoda): proposed replacement of the lectotype by a neotype**

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Abstract. The purpose of this application is to conserve the current usage and understanding of the specific name of *Hauffenia* (or *Neohoratia* or *Islamia*) *minuta* (Draparnaud, 1805) for a small, valvatiform, freshwater prosobranch mollusc (family HYDROBIIDAE) from central Europe. At present the species is typified by a lectotype of uncertain identity, and it is proposed that this be replaced with a neotype which accords with the established understanding of the species.

Keywords. Nomenclature; taxonomy; Gastropoda; prosobranchs; HYDROBIIDAE; Europe; *Hauffenia minuta*; *Neohoratia minuta*; *Islamia minuta*.

1. The nominal species *Valvata minuta* Draparnaud, 1805 (p. 42, pl. 1, figs. 36–38) was the first established for a group of very small, valvatiform shelled, freshwater hydrobiid prosobranch gastropods. The group has had a complex taxonomic history (Bodon, Manganelli & Giusti, in press). The identity of *V. minuta* has been the subject of controversy because the original description and illustrations have not enabled subsequent unambiguous identification. Draparnaud did not mention a locality or specimens.

2. Following Draparnaud's death, his heirs sold his mollusc collection in 1820 to the Naturhistorisches Museum in Vienna. In 1894 Locard studied Draparnaud's collection and in 1895 (pp. 20, 46–47) recorded that the type material of *Valvata minuta* consisted of two shells in Vienna and a third shell that had been donated to the collection of Bischof von Hohenwarth. The fate of the latter specimen is unknown, but the specimens in Vienna are extant, catalogue no. 1820/xxvi/21. Some years ago they were studied by Binder (1966), who demonstrated that they belonged to two different species. One of them, represented by a whole shell which Binder (1966, fig. 1) designated as the 'type', is a prosobranch hydrobiid species (reported as *Hauffenia minuta*); the other, represented by a fragment of the apex of a shell, is a heterobranch valvatid species (*Valvata piscinalis* Müller, 1774).

3. Bernasconi (1975) published the first redescription of *Hauffenia minuta* based on a study of some Swiss and French populations. He discussed three geographical 'subspecies', including *Hauffenia minuta minuta* (Draparnaud, 1805) and *H. m. globulina* (Paladilhe, 1866, published as *Valvata globulina* from the Garonne basin). Bernasconi was aware of the lectotype designation by Binder (1966) but his nominotypical subspecies has the anatomy of *V. globulina*, and the locality he gave

for the latter (Vidourle, Sauve, Gard), and not that that he gave for *H. minuta minuta* (Areuse, St Sulpice), was cited as the type locality of the species. Both these localities are outside the ranges reported by the authors of the two taxa. In fact, that given by Bernasconi (1975) for *H. m. minuta* is in the Swiss canton of Neuchâtel (territory of the King of Prussia before 1815) and not in France; that given for *H. m. globulina* is in the Rhône and not in the Garonne basin. Bernasconi (1975, p. 304) mentioned a 'nouveau typoi'de' for *H. minuta*, but this did not relate to a particular specimen and would not be a valid neotype designation even if original material did not exist.

4. Study of the lectotype of *Valvata minuta* designated by Binder (1966) does not enable the species to be identified with certainty. It has a shell shape similar to material currently known as *Islamia minuta* from the Jura but differs by a shorter shell. On the basis of shell size (height 0.60 mm, diameter 1.34 mm), it is more similar to '*Horatia*' *exilis* (Paladilhe, 1867), from the department of Hérault, differing only in that the last whorl is not dilated near the aperture (Bodon, Manganelli & Giusti, in press, have provided a redescription of '*Horatia*' *exilis* and assigned *V. minuta* and *V. globulina*, as distinct species, to the genus *Islamia* Radoman, 1973).

5. No locality data is reported on the labels accompanying the type material of *H. minuta* in Draparnaud's collection at the Naturhistorisches Museum in Vienna. It must therefore be assumed that the type locality can only be cited as 'France', as given in the title of Draparnaud's (1805) work (*Histoire naturelle des mollusques terrestres et fluviatiles de la France*). If Draparnaud collected this material near Montpellier, the town where he lived, then his *V. minuta* cannot be the species it is currently understood to be because this lives much further north, but it may be '*Horatia*' *exilis*.

6. In this uncertain situation, we propose that the type status of the lectotype of *Valvata minuta* kept in the Draparnaud Collection in Vienna (specimen no. 1820/xxvi/21) be set aside and that a neotype be designated for this species, allowing clarification of its taxonomic status and conservation of the name in its current sense. Recent representative publications demonstrating the current usage of *Hauffenia minuta* are Bernasconi (1977, 1985 and 1986), Bole & Velkovrh (1986), Bouchet (1990) and Boeters (1998). The proposed neotype (a shell) was collected at Source de l'Ain, Nozeroy, Jura. It was chosen from a population which is already anatomically known (see Bernasconi, 1975) and which has been restudied, and which lives in a major spring of the French Jura where no other similar *Islamia* species lives. It is deposited in the Naturhistorisches Museum, Vienna (catalogue no. 100485) and a complete description and illustration of the proposed neotype is given by Bodon, Manganelli & Giusti (in press).

7. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all previous type fixations for the nominal species *Valvata minuta* Draparnaud, 1805 and to designate as neotype the specimen no. 100485 in the Naturhistorisches Museum in Vienna;
- (2) to place on the Official List of Specific Names in Zoology the name *minuta* Draparnaud, 1805, as published in the binomen *Valvata minuta* and as defined by the neotype designated in (1) above.

References

Bernasconi, R. 1975. Les hydrobides (Mollusques Gastéropodes) cavernicoles de Suisse et des régions limitrophes. V. Révision des *Hauffenia* Pollonera. *Annales de Spéléologie*, **30**: 303–311.

Bernasconi, R. 1977. *Hauffenia (Neohoratia) minuta minuta*, un mollusque gastéropode hydrobide des eaux souterraines du Jura Neuchâtelois. *Cavernes, Suppl.1*: 28–32.

Bernasconi, R. 1985. Anatomie von *Hauffenia minuta* ssp. *spirata* Bernasconi 1975 und Beschreibung von *Hauffenia minuta consolatensis* n. spp. *Heldia*, **1**: 63–65.

Bernasconi, R. 1986. Les hydrobides de l'Europe de l'Ouest (Moll. Gast. Prosobr.). Comunicaciones 9. *Congreso internacional de Espeleología*, Barcelona, **2**: 184–186.

Binder, E. 1966. Position systématique de *Valvata minuta* Drap., *Valvata globulina* Palad. et d'autres petites espèces attribuées au genre *Valvata* (Gastropoda, Prosobranchia). *Atti della Società Italiana di Scienze Naturali e del Museo Civico di Storia Naturale di Milano*, **105**(4): 371–376.

Bodon, M., Manganelli, G. & Giusti, F. In press. A survey of the European valvatiform hydrobiid genera with special reference to *Hauffenia* Pollonera, 1898 (Gastropoda: Hydrobiidae). *Malacologia*.

Boeters, H.D. 1998. Mollusca: Gastropoda: Rissooidea. *Süßwasserfauna von Mitteleuropa*, **5**(1–2): 1–76.

Bole, J. & Velkovrh, F. 1986. Mollusca from continental subterranean aquatic habitats. Pp. 177–208 in Botosaneanu, L. (Ed.), *Stygofauna mundi. A faunistic, distributional and ecological synthesis of the world fauna inhabiting subterranean waters (including the marine interstitial)*. Leiden.

Draparnaud, J.P.R. 1805. *Histoire naturelle des mollusques terrestres et fluviatiles de la France*. viii, 164, [1] pp., 13 pls. Montpellier & Paris.

Locard, A. 1895. *Ipsa Draparnaudi conchyliia. Études sur la collection conchyliologique de Draparnaud, au Musée Impérial et Royal d'Histoire Naturelle de Vienne*. 190 pp. Paris. (Also published in 1897, in *Annales de la Société d'Agriculture, Sciences et Industrie de Lyon*, (7)4: 5–190).

Paladilhe, A. 1866. Nouvelles miscellanées malacologiques. II. Espèces inédites, nouvelles ou peu connues du département de l'Hérault. *Revue et Magasin de Zoologie Pure et Appliquée*, (2)18: 168–171.

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